

Appl. No. 10/151,350
Amdt. Dated September 23, 2003
Reply to Office Action of June 23, 2003

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-146 (Cancelled)

147. (New) A method for treating a mammalian patient who has a defect in the wall of a blood vessel that has a true lumen and a wall, said method comprising the steps of:

A. providing a system that comprises; i) a delivery catheter; ii) an intravascular member that has a collapsed configuration wherein it is positionable within the delivery catheter and an expanded configuration wherein it is generally tubular in configuration and defines a hollow flow channel therethrough, and iii) an advancer for advancing the intravascular member out of the delivery catheter, said intravascular member being connected to the advancer by way of a releasable connection;

B. positioning the delivery catheter within the true lumen of the blood vessel near the defect;

C. using the advancer apparatus to advance the intravascular member out of the delivery catheter and causing the intravascular member to transition to its expanded configuration within the true lumen of the blood vessel, adjacent to the defect, such that, i) the intravascular member engages the wall of the blood vessel so as to be held in substantially fixed position within the true lumen of the blood vessel, ii) no substantial portion of the intravascular member extends into the defect and iii) blood flowing through the true lumen of the blood vessel lumen passes through the flow channel of the intravascular member; and,

D. releasing the releasable connection and removing the delivery catheter, thereby leaving the expanded intravascular member implanted within the true lumen of the blood vessel adjacent to the defect.

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112 148. (New) A method according to Claim 147 wherein the performance of Steps B and C comprises:

placing a first catheter at a first position within the patient's vasculature;

advancing a second catheter through the lumen of the first catheter and to a second position within the patient's vasculature;

advancing the delivery catheter through the lumen of the second catheter to a third position within the true lumen of the blood vessel, adjacent to the vessel wall defect; and

while the first, second and third catheters are in their respective first, second and third positions, advancing the intravascular member out of the lumen of the third catheter such that the intravascular member assumes its expanded configuration within the true lumen of the blood vessel.

149. (New) A method according to Claim 147 further comprising the steps of:

E. providing an embolus member sized to fit within the vessel wall defect; and,

F. positioning the embolus member within the vessel wall defect such that the intravascular member retains the embolus member within the vessel wall defect.

150. (New) A method according to Claim 149 wherein Step F is performed after Step C.

151. (New) A method according to Claim 149 wherein Step F is performed before Step C.

152. (New) A method according to Claim 149 wherein Step F comprises:

i positioning a delivery catheter having a distal end within the intravascular member after completion of Step C;

ii causing the distal end of the delivery catheter to advance through a portion of the intravascular member and into the vessel wall defect;

iii delivering the embolus member out of the distal end of the delivery catheter and into the vessel wall defect; and,

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- iv removing the delivery catheter, leaving the embolus member within the vessel wall defect with the intravascular member preventing the embolus member from escaping from the vessel wall defect into the lumen of the blood vessel.

153. (New) A method according to Claim 152 wherein the vessel wall defect is an aneurysm and wherein Step F comprises positioning the embolus member within the interior of the aneurysm and outside of the true lumen of the blood vessel.

154. (New) A method according to Claim 152 wherein the aneurysm is a wide mouthed aneurysm and wherein Step F comprises delivering the embolus member through the mouth of the aneurysm and into the aneurysm sac.

155. (New) A method according to Claim 152 wherein at least a portion of the embolic member delivered in Step F is thrombogenic.

156. (Amended) A system for implantation of an intravascular member within the true lumen of a blood vessel, said system comprising:

an elongate, flexible delivery catheter having a lumen extending longitudinally therethrough and a distal end opening, said delivery catheter being advanceable in to the true lumen of a blood vessel wherein the intravascular member is to be implanted;

an intravascular member that has a collapsed configuration wherein it is positionable within the delivery catheter and an expanded configuration wherein it is generally tubular in configuration and defines a hollow flow channel therethrough, and

an advancer for advancing the intravascular member out of the delivery catheter, said intravascular member being connected to the advancer by way of a releasable connection;

said advancer being useable to advance the intravascular member out of the distal end opening of the delivery catheter such that the intravascular member expands to its expanded configuration within the true lumen of the blood vessel in an orientation that is substantially coaxial with the advancer and such that blood flowing through the blood vessel lumen will flow

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through the flow channel of the intravascular member, while the intravascular member remains
connected to the advancer apparatus by way of said releasable connection;

said releasable connection being thereafter volitionally severable such that the delivery catheter and advancer apparatus may be removed from the blood vessel lumen leaving the expanded intravascular member implanted in said blood vessel lumen.

157. (New) A system according to Claim 156 wherein the intravascular member comprises a strand that is substantially linear when said collapsed configuration and substantially curvilinear when in said expanded configuration.

158. (New) A system according to Claim 157 wherein the strand forms a helix when in said expanded configuration.

159. (New) A system according to Claim 156 further comprising apparatus for releasing the releasable connection.

160. (New) A system according to Claim 156 wherein the releasable connection comprises a ball and claw.

161. (New) A system according to Claim 156 wherein the releasable connection is releasable by being cut and wherein the apparatus for releasing the releasable connection comprises apparatus for cutting the releasable connection.

162. (New) A system according to Claim 156 wherein the releasable connection is releasable in response to an electrical current and wherein the apparatus for releasing the releasable connection comprises apparatus for delivering electrical current.